

432 AND ABOVE EME NEWS

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CONDITIONS: We have 3 contests to cover this month. The big one is the VK3UM Memorial/Dubus 23 cm CW EME Contest. This contest is always very popular. This year was no exception, although conditions were not the best for easy CW copy. It was still great fun. I1NDP appears to have the top score with 91 contacts but has not included his multiplier (mult). OK2DL reports 84x73. The Dubus 10 GHz Up CW Contest is also covered in this newsletter (NL). Conditions were not the best this year because of high spectral spreading, which especially limited 24 GHz operation, but still attracted lots of activity to 3 cm. The top score is from the OK1KIR group with 41x38. The ARI Spring EME Trophy Contest also generated much interest. It counts CW and digital contacts separately for contest points. This year's winners were on 432 Mixed DL7APV; 1296 Mixed A) PA3FXB and B) DL3EBJ, and CW A) IK1FJI and B) DG5CST, 2300 SP3XBO; 10 GHz OK2AQ; and 24 GHz OK1DFC. The full results can be seen at: <http://www.eme2008.org/ari-eme/Results%20Trophy%20Spring%202021.pdf>.

Coming up on 12/13 June is the Dubus 6 cm CW EME Contest. Also, the same weekend is the ARRL's June VHF Contest, although primarily a tropo contest, it can attract EME activity since EME contacts count the same as tropo; and the 70 cm CW Activity Time Period (ATP) on Sunday from 0630-0830 & 1530-1730.

Dxpedition News: HB9Q has postpone his SV5/HB9COG dxpedition to May 2022. KB7Q had an extraordinarily success States dxpedition, and an extra 432 CW outing to WY – see Gene's report in this NL. As a result of his effort K2UYH completed the 3rd 1296 WAS and HB9Q and OK1KIR are at 49 States. In thanks to KB7Q's efforts, Al organized a Zoom virtual meeting on 7 May to toast Gene. The meeting attracted many EMEers, including in picture L-R and U-D OK1TEH, K2UYH and W2HRO, W7GJ, AI1K, NC1I, KN0WS, PA3FXB, KB7Q, SP1JNY, G3LTF, K2YY, W2LPL, K1DS, VE4MA, OK1IL and N1AV.



SA6BUN announced the first 24 GHz EME from Sweden – see Michael's report. **EME 2021 in Prague:** OK1DFC has announced EME2021 been postponed to Aug 2022 because of COVID19 in Europe (EU). Hopefully 2022 will bring the better news. See more info at: <https://www.eme2020.cz>.

REPORTS:

DB6NT: Michael db6nt@gmx.de sends 3 cm EME info – On the weekend of 17-18 April during the 10 GHz Dubus Contest, the weather conditions were not good. I had to clear the snow from my dish several times, but was able to work the following stations on 3 cm in CW: OK1KIR, SP2MHR, OZ1LPR, HB9Q, PA3DZL, SP6JLW, SA6BUN, RA3EME, HB9BBD, DL4DTU, OK1CA, DL7YC, OH2DG, F2CT, HB9BHU, G4NNS, DF1SR, ES5PC, OK1DFC, IW2FZR, OK2AQ and OZ6OL for a total of 22x19. I had planned to QRV on 24 GHz on Sunday too. The conditions were so bad that I couldn't assemble my equipment - sorry. If someone wants to test on 24 GHz, I would be happy to sked. Please email me.

DJ3JJ: Andreas dj3jj@gmx.net sends news from his side – In the VK3UM Memorial (23 cm Dubus) Contest I worked 14 stations. All were significantly weaker than normal as conditions did not seem good. I was struggling with bad QSB, especially on Sunday. After the contest, I checked my system and found that my dish was 1.5 degs low in elevation. After correcting this error in my OE5JFL controller, I had nice CW echoes again that were greatly missed during the contest. I was very happy to copy DU3T (549) in QSO with ON5GS despite my elevation error. I called Ron, but could not get his attention. In summary, I had 30 % less QSOs than in 2020 when I worked 20 stations; but still had fun.

DL7APV: Bernd dl7apv@gmx.de report a quiet time on the Moon – I did work a few new ones in April and May; JA4LJB in PM74, JF6CTK in PM52, AA5C in EM13, RJ3DC in KO95 using 2 x 33 el yagis and 200 W, SP6VGJ in JO81 using 4 x 21 el yagis and 100 W, KA6U in EM93 using 2 x 25 el yagis and 33 W, N5NHJ in EM13, JR7PJS in QM07 using 2 x 13 el yagis and 50 W, PA3FWV in JO11 using 4 x 16 el yagis and 65 W, and KB7Q on CW in DN44. I tested with several stations a new version of MAP65 with Q65

included. It looks to me that the sensitivity of this MAP65/Q65 is much better compared to the MAP65/JT65. I had with Q65 compared to MAP/Q65 always the same reports ± 1 dB; and both decoded signal at the limit of detection. Drift still seems to be a problem, but the group is working on a fix. I will use Q65 in the future! I now have detected my Pulsar #100 on 432 (see <http://dl7apv.de/Pulsare/Pulsare.htm>), but it's getting hard to find new ones. I now have a 150 W PA for 23 cm and could finish my DFC septum feed, but will not put up a dish very soon; maybe next year. At present only tropo operation is planned.

F2CT: Guy f2ct@wanadoo.fr reports on his REF DUBUS and ARI Contest results on 10 GHz EME – I very much enjoyed operating with my new 3 cm EME setup. In the Dubus 3 cm Contest on 17-18 April using random CW, I worked DB6NT, DL4DTU, DL7YC, ES5PC, F5HRY, G4NNS, HB9BHU, IW2FZR, IZ2DJP, OH2DG, OK1DFC, OK1KIR, OK2AQ, OZ1LPR, RA3EME, SM6CKU, SM6PGP, SP6JLW, UR5LX, VK3NX, W3SZ and WA3RGQ for a total of 22x20. In the ARI EME Contest on 24-25 April also using random CW on 10 GHz, I QSO'd F5HRY, HB9BBD, HB9Q, IK2FZR, IZ2DJP, OH2DG, OK2AQ, PA0BAT, SP2HMR, UA4AAV, UR5LX and VK3NX for a total of 12 contacts. Unfortunately, I could not be QRV on 23 cm for VK3UM Memorial contest. I will be QRV on 6 cm during the REF-Dubus EME party in June.

F5HRY: Hervé f5hry@wanadoo.fr sends the following report -- I live in an dense urban environment with a small garden, less than 300 m². Thus, working EME is a challenge as no really big antennas can be erected. However, before leaving this QTH, my goal has been to achieve at least one QSO on each permitted band from 144 to 10 GHz. I also wanted to make these QSOs using CW or other human mode. During the recent REF/DUBUS 3 cm EME Contest, I succeeded by achieving my first QSOs on 10 GHz, after about 1 year of hard work. My station is a 1.8 m offset dish, 28 W SSPA and a 0.8 dB NF WG LNA. I have a very limited window (+/- 4 h depending on the Moon's declination) as I have trees, a house and mount blockage. Despite the apogee conditions, I could hear some weak CW echoes, which made me very happy. I worked OK1KIR for initial #1, F2CT #2, PA3DZL #3, OK1DFC #4, SA6BUN #5 and OZ1LPR #6. CWNr were SP2HMR (loud), OK1CA and SP6JLW (very loud), and few other weaker signals. Later, I added IW2FZR #7, SM6CKU #8, UR5LX #9, PA0BAT #10 and ES5PC for #11. I also CWNr IK0HWJ. Besides this happiness, I must confess that I am deeply sad about the way EME has turned. 144 and 432 MHz are already dead on CW, and 1296 is on the way. Even the upper bands are following this transition. This is not a new debate. If you do not consider valid EME QSOs made between 2 machines, you are lonely most of the time with only your own echoes to hear. The new machine modes, of course, are much more efficient than CW, but they have broken my toy, probably forever! I came to EME for the magic of hearing signals bounced off the Moon. I will quit EME, because I am unable to hear anything, anymore.



F5HRY's 1.8 m offset dish used for 10 GHz CW EME

G3LTF: Peter's g3ltf@btinternet.com EME report for May follows -- As soon as my new feed access steps arrived, I was back on 23 cm. On 8 May, I worked using CW SM6CKU, G4CCH, SM5DGX, IK2DDR for initial #501, SP3XBO and K2UYH. It was great to be back on and test the gear ahead of the contest. I measured Sun noise at 19.7 dB, and Moon noise at 0.55 dB and Taurus 0.6 dB. On 15 May, during the 23 cm Dubus/VK3UM Memorial Contest, I worked OK2DL, OK1CA, ES5PC, SM5DGX, OH100SARL, KL6M, SP2HMR, DG5CST, OH1LRY, DL4DTU, SM6CKU, DU3T for initial #502 and DXCC 78, LZ2US, DF3RU, IK1FJI, OK1CS, OK2KKD, SM7FWZ, SM2CEW, UA9FAD, G4CCH, ON5GS, DL7UDA, SP7DCS, SM4GGC, UA3PTW, IK3MAC, I1NDP, DL0SHF, DK7LJ on SSB, IK2DDR, PA3DZL, HB9Q, OM4XA, LZ1DX, SP3XBO, OZ4MM, OK1KIR, OK2ULQ, DL6SH, IK5VLS, VE6TA, K2UYH, IZ1BPN, 9A5AA, DF2GB, N8CQ, WA6PY, VA7MM, VE6BGT, F6CGJ, N5BF, OE5JFL and W2BYP; and continuing on 16 May K5DOG, DL7YC, VK5MC, IK3COJ, IW2FZR, DJ3JJ, IK6EIW, PE1LWT, SM6FHZ, F5FEN, RN6MA, I5MPK, SM6PGP, W6YX, LX1DB on SSB, PA2DW and VE4MA. I ended with a total of 72x64, my best DUBUS 23 cm result. CWNr were CT1FGW, YO2BCT, RA4HL, IK3GHY, VK4AFL, DJ7FJ and KN0WS, and heard AA4MD and IK2MMB. The activity was almost continuously high. After the contest, on 18 May I worked CT1FGW #503, SM5DGX, VE6TA and I5MPK, and on 19 May VK4AFL. I changed the feed to 70 cm and worked using CW KB7Q for initial #487 in WY and my 49th State for WAS -all on CW, followed by K5DOG #488. It was very good of Gene to make the trip to give me another State on CW, it took 35 mins to complete, rather like old times! I hope to be QRV on 6 cm for the last of this year's Dubus CW Contest weekends, but moving PSUs up to the dish and back is not easy at present until I get full mobility back. Two contest operating points: I think that some sort of frequency display is needed to catch people calling off frequency (a smart move in a pile up anyway) and to catch people tailending you when it's NOT your frequency, and to spot the really weak ones. There are also stations where the LO shifts between TX and RX, (not uncommon in HB systems, been there) and they end up off frequency. The

second point is that I now have this lovely TS590SG with excellent DSP down to 50 Hz and 1 Hz RIT, but I still find an additional improvement in very weak signal readability when I add my old tunable switched capacitor MF8 filter set to 50 Hz; I suspect it maybe a passband shape effect.

G4DDK: Sam jewell@btinternet.com has been focusing on 23 cm -- I have not spent a lot of time on EME for a few years. When I recently I checked my log, I found that on 1296 I was up to only mixed initial #90*. I decided to try to reach the #100* before the end of May. Now I am at #97*. By the way there has been a lot of interest in the VLNA23 from the USA in the last year. It is mainly for built preamps. I had rebuilt my 9 cm system. I still have a bit more to do, but am QRV on 9 cm.

HB9Q: Dan besides having to delay his SV5/HB9COG dpxpedition to next year, is missing QSLs from K5PJR (MO) and K7CA (NV). Does anyone know how to reach either of them?

I1NDP: Nando moon@moonbounce.info was a **top scorer in the Dubus 1296**, but thinks CW copy could have been better -- I had lot of fun during the contest and appreciate the QSOs, but often found it very difficult to identify a call. If all operators followed a few basic common sense rules, it would make it much easier. Not all stations can be exactly on the frequency of your own echo. I am using a 50 Hz filter on CW and 1 Hertz VFO definition, if the signal is not exactly in the center, it takes a while to get the call. So if you may be weak, call a little longer. Also, regarding the spacing between CW letters; they are often too closely spaced, and adding the effects of libration are not easily distinguished. So, good spacing, greater than the regular dot space helps a lot, regardless of the keying speed. In any case, thanks the good activity, I had great satisfaction to complete 91 QSOs (8,600 points)... Especially considering that I lose at least a couple of hours at moonrise and set time because of surrounding obstacles. More at: http://i1ndp.altervista.org/emelog_23.php

IK1FJI: Valter valter_dls@yahoo.it was quite active during April and the start of May on 1296 -- I repaired my cable and EIA flange problem. And then worked in April SM5DGX (579/579), **KB7Q in AR, AL, MI and KY** using CW on sked -- it would have been very hard on random, also worked with JT65C and Q65, **DU3T (569/569)**, VE4MA (569/569), ON5GS (569/569), DG5CTS (55/57) using SSB and IK3MAC (56/54) using SSB; and on 5 May IK2DDR (539/559) to bring me to initial #135. In the **ARI Contest**, I QSO'd 31 using random CW including CT1FGW #136. In 23 cm the **DUBUS Contest**, I found very good activity and worked 59 on CW and one on SSB for a score of 61x39 or 237,900 points. Initials were OH100SRAL #137 and SM7FWZ #138. I had on Saturday very heavy rain, and on Sunday had to QRT after 5 hours due to high winds. My station was a 3.2 m dish, TH327 PA, < 0.3 NF LNA and IC-7400 SGLAB transverter. I hope to expand my dish to 4 m sometime in the future.

K4QF: Ben LoWeb@esp-inc.net is working to get AL permanently on 1296 EME with the help of W2HRO and others writes -- In 1975 when I got on 70 cm. EME, I was somewhat flying blind. I had moved to AL for TX in 1973 where I was active on 70 cm tropo. W5HN told me there had never been a 2304 QSO in TX. So, Leroy and I went to work on 2304 stations. Leroy got 5 W from a surplus cavity amplifier shimmed to 2304, and I got 100 mW out of an SRD multiplier. K2RIW published his 12' stressed dish article. I built one to get higher ERP for 2304. Before I got any signal to the dish, I moved to Huntsville for a new job. Once in AL, I learned that there were no other stations within my normal tropo range on 432. I had visited VK3ATN and Sam Harris at Arecibo. Both tried to get me on EME. I determined that I needed a minimum of a 16 ft. dish and about 600 W. An K2RIW 2 x 4CX250's seemed the way to get the power. I added a 2' extension to my 12' dish, and built a corner reflector for the feed. Getting devices for a good preamp was harder. JA9BOH sent me 2 of the devices and I designed preamp with 32 dB gain and a 0.9 dB NF. I put the preamp at the feed and on my first attempt heard K2UYH. For work, I had to go to NJ. I visited Al and played a recording of his call off of the moon. He immediately pushed for me to get my transmitter running, which I did in a few weeks. That's what brought me to where I am today. When I retired a couple of years ago, I resurrected my K2RIW dish that lay next to the house for 30+ years. It is 3.5 m and is stressed for a 0.4 F/D ratio. I had a concept for a crossed corner reflector for circular pol. I built it, but could just hear a few stations. My best copy was on SM4IVE. I decided to build an SM6FHZ patch feed. But have not been able to get it to work and not heard on EME anything since. My antenna is mounted on a polar mount, and my drive scheme seems to be tracking just fine. I have a 75 W SSPA and the pieces to increase my power to near 250 W. I hope to solve my problems and be QRV soon.

KB7Q: Gene geneshea@gmail.com **accomplished what has to be one of the most successful States dpxpedition ever, and has already completed another; his report follows** -- On 15 April we early arrived early at W5ZN's place in AR. Set up was error free, so I was QRV much sooner than expected. I put the time to good use working KA1GT (27DB) and KB2SA (27DB). It took a while to get my azimuth ring aligned, but things finally came together. 16 April was a big day of 23 cm EME. - AR must be rare! I completed 52 contacts with 50 stations made under cloudy skies, and a few rain drops. K2UYH was worked for his 48th State. Logged were HB9Q (16DB thru trees), DG5CST (15DB), OK1KIR (16DB), UA3PTW (18DB), NC1I (17DB), OK2DL (11DB), OK1CA (8DB), OZ4MM (13DB), DL7UDA (16DB), DK4RC (8DB), IK1FJI (18DB), PA3DZL (16DB), ES3RF (24DB), DF3RU (17DB), DL8FBD (23DB), G4CCH (14DB), PA3FXB (21DB), UA9FAD (25DB), DG0FE (18DB), OK1IL (18DB), UA9FA (23DB), ON4QQ (19DB), DK3WG (26DB), N1AV (18DB), W2HRO (18DB), G4YTL (25DB), OK1DFC (21DB), CX2SC (27DB), PA0BAT - 25DB), OM4XA (25DB), SM4GGC (18DB), ON4AOI (17DB), RA4HL (19DB), IK3COJ (18DB), DF2VJ (26DB), K2UYH (11DB), OK1KIR CW (429), W5LUA (9DB), IK7EZN (21DB), SM6CKU (9DB), I5YDI (23DB), AA4MD

(22DB), KD5FZX (9DB), SM5DGX (8DB), VE4MA (20DB), G4DDK (30DB), N5BF (24DB), VE3KRP (29DB), PA2DW (23DB), GM0PJD (29DB), K2UYH CW (419) and K5DOG (20DB). 17 April was a CW special. The following were logged on "Charlie Whiskey": DG5CST, G4CCH, OK2DL, IK1FJI, DF3RU, and HB9Q. HB9Q was Q5 on SSB, but I didn't have enough signal for us to complete. SP5GDM (27DB) and PE1CHQ (15DB) were added on JT65c to bring the grand total to 62 contacts with 54 different stations. Then on to MS. 18 April at Grenada Lake, MS, it was a smooth 200 mile ride to MS, so I decided to throw the station together, and see who wanted to play 23 cm EME. K2UYH nailed down State #49 on both CW and JT65c, and 19 others were worked - a great start to the MS operation. We had a great camp site, and the weather was perfect. In the log: DF3RU (15DB), G4CCH (14DB), SM6CKU (22DB), DG5CST (14DB), PA3FXB (22DB), K2UYH (16DB), N1AV (21DB), SM4GGC (23DB), W2HRO (27DB), DL8FBD (25DB), OK1IL (21DB), HB9Q (5DB), K5DOG (22DB), DK4RC (12DB), W5LUA (23DB), OK1DFC (23DB) Q65-60C, KD5FZX (17DB) Q65-60C, VE4MA (21DB) Q65 60C, K2UYH CW, NC1I (19DB) and KA1GT (22DB) Q65-30B. 19 April in MS, I moved the dish to a better spot and swapped out a 12 year old LMR-600 feed line. The changes seemed to restore my signal nicely. QSO'd on CW were OK1KIR (529), G4CCH (529), SM6CKU (419), HB9Q (549) and IK1FJI (429); on Q65-30B 14 stations in 55 minutes as well as several others. Logged with the new mode were OK1CA (16DB), OK1KIR (16DB), PE1LWT (26DB), IK3COJ (21DB), ES3RF (22DB), AA4MD (20DB), DK3WG (26DB), G4YTL (23DB), DL7UDA (20DB), PA0BAT (17DB), DG0FE (25DB), UA9FA (23DB), KA1GT (22DB), IK1FJI (18DB) and G4DDK (28DB). With JT65C logged: UA3PTW (13DB), IK1FJI (15DB), UA9FAD (30DB), I5YDI (21DB), PE1CHQ (18DB), VE3KRP (26DB), DF2GB (20DB), ES3RF (22DB), IK2MMB (18DB), OM4XA (22DB), RX6AIA (26DB), DF2VJ (25DB), KD5FZX (9DB) and ON4AOI (28DB). I ran out of folks to work with plenty of Moon left. 47 different stations were worked from EM53 this time. 20 April in MS, I started at moonrise and was QRV for three hours to work a final few. DG5CST was an easy CW contact (519), then on JT65C I worked PA3DZL (16DB), DG0FE (18DB), I7FNW (18DB), RN6MA (25DB), PE1CHQ (16DB), UA9FEM (24DB) and G4DDK (25DB). This made 51 worked, many on more than one mode. All the gear was packed and we were off to AL about 200 miles away.



Al fresco operating on the shores of Wheeler Lake, AL

21 April we arrived in morning at Wheeler Lake, AL. Setup went well and the Moon was just clearing the only tree at our campsite when I started calling CQ. It was another flawless afternoon of operating with 39 stations logged. The big news was completing an easy contact with K2UYH for his State #50. K4QF stopped by for a visit and seemed to enjoy the show! In the log were DL7UDA (18DB), PE1CHQ (17DB), HB9Q (5DB), DF3RU (15DB), SM6CKU (17DB), OK1KIR (12DB), OK1IL (21DB), ON5GS (21DB), G4CCH (16DB), OK1DFC (22DB), DG0FE (21DB), PA3DZL (18DB), DL8FBD (25DB), ON4AOI (23DB), K2UYH (17DB), IK1FJI (20DB), UA9FAD (26DB), NC1I (12DB), ES3RF (24DB), K5DOG (18DB), PA0BAT (20DB), PA3FXB (24DB), DF2GB (18DB), G4DDK (25DB), OM4XA (21DB), W2HRO (20DB), G4YTL (23DB), N5BF (24DB), VE4MA (21DB), KA1GT (21DB), W5LUA (11DB), SM5DGX (10DB), DF2VJ (26DB), RN6MA (26DB), KB2SA (24DB), N1AV (19DB), AA6I (19DB) and KD5FZX (10DB). 22 April in AL with a perfect day to finish up our AL stay - a near full moon, no wind, and 70 degs. I worked several additional folks to bump the total to 53. On JT65C I added UA3PTW (20DB), ON4QQ (21DB), DL3EBJ (17DB), IK3COJ (23DB), PE1LWT (24DB), LA3EQ (28DB), OK2DL (8DB), DG5CST (9DB), SM4GGC (24DB), I5YDI (25DB), VE3KRP (23DB), IK7EZN (27DB), DK3WG (28DB), LA1TN (23DB). CW signals were quite good; I worked were K4QF (419) on tropo, DK3WG (329), DG5CST (529), HB9Q (529), OK1KIR (419), G4CCH (519) and IK1FJI (329). 23 April we arrived at Mount Sherman, KY; our sixth State and the end of the dxpedition. We drove up to N8DJB's place in light rain. The skies cleared a bit for setup, and even went blue with a visual Moon for most of the actual operating session. The Q65-30B experiment was a great success, in 1.5 hours, I worked 27 stations. Logged were SM5GGC (23DB), IK1FJI (17DB), HB9Q (3DB), OK1KIR (11DB), PA0BAT (18DB), G4CCH (19DB), OK2DL (9DB), DG5CST (10DB), OK1DFC (20DB), PA3DZL (15DB), DK3WG (23DB), DF4RC (11DB), ES3RF (21DB), SM6CKU (11DB), DL8FBD (21DB), OK1IL (20DB), G4YTL (22DB), UA9FAD (24DB), IK7EZN (22DB), SM5DGX (13DB), PE1LWT (20DB), OM4XA (20DB), PA3FXB (19DB), DL7UDA (16DB), KA1GT (21DB), DG0FE (DB19) and K2UYH (17DB). JT65C contacts were also made with NC1I (9DB), ON4AOI (12DB), IK1FJI (13DB), K2UYH (11DB), VE4MA (18DB), VE3KRP (19DB), DF2GB (19DB), GM0PJD (25DB), K5DOG (17DB), CX2SC (25DB), KN0WS (20DB), N1AV (19DB), PE1CHQ (18DB), PA3FXB (18DB), N5BF (25DB), DL3EBJ (12DB) and W2HRO (20DB). There was also time for CW. Conditions were excellent and I worked HB9Q (539), OK1KIR (529), G4CCH (519), IK1FJI (419), and K2UYH (419). Altogether 45 stations were worked. Post dxpedition, I received word that G3LTF needed WY on 70 cm CW for State 49. Who doesn't like a challenge? On 19 May, I threw my gear into the truck, headed south, and spent a lovely spring afternoon working all I could hear on CW from my favorite Yellowstone Park spot. I logged G3LTF (419), DL7APV (529), DL9KR (529), OH2DG (429), SM2CEW (419), DG5CST (529), UA3PTW (419) and KL6M (419). I did switch to JT656B to add ON4AOI (18DB), W2HRO (20DB), DL8FBD (22DB). Not a bad outing for a single 9 wl Yagi and 500 W. *Donations are greatly*

appreciated PayPal: geneshea@gmail.com. See for more info <http://kb7qgrid.blogspot.com>.

KL6M: Mike melum@alaska.net is QRV again after breaking his leg skiing -- I participated in the **VK3UM Memorial Dubus 23 cm Contest**. ALWAYS something must go wrong. I fixed a bad coax jumper causing 140 W reflected. Then I was running full power 700 W out of my W6PQL amp on my first moonrise and heard arcing that me shut down. I pulled the amp out of the rack and there was a big burned mark on the PC board. I scraped it off and it ran OK at 450 W, so I operated there for the rest of the contest. On the second moonrise, all of a sudden, no power out and the entire amp was dead. This was a failed AC power problem! I still managed to work **68 QSOs x 52 mults** as follows: K2UYH (579/579), **DU3T (569/579)**, WA9FWD (579/579), VE6TA (579/579), N5BF (569/579), K5DOG (569/589), WA6PY (569/569), VK5MC (569/559), DL0SHF (589/569), DG5CST (589/589), OH100SRAL (589/589), OK2DL (589/589), OK1CA (589/579), HB9Q (599/569), LZ2US (579/589), G3LTF (579/589), OK1KKD (569/579), SP7DCS (579/579), OK1CS (569/579), OH1LRY (569/579), G4CCH (589/589), PA3CSG (579/579), ES5PC (569/559), OK1KIR (579/579), SM5DGX (589/599), IK2DDR (559/569), DL6SH (589/589), DF3RU (579/589), UA3PTW (599/599), SM4GGC (559/569), CT1FGW (569/579), SM6CKU (579/579), UA9FAD (559/559), G4RGK (559/559), SP2HMR (559/579), 9A5AA (569/589), PA3DZL (579/579), IW2FZR (569/579), DL7YC (569/579), W6YX (579/579), I1NDP (589/589), G4CCH (579/599), OK2ULQ (569/589), VE6BGT (579/589), SM6PGP (559/569), VA7MM (559/579), IK3COJ (569/579), OM4XA (559/579), DF2VJ (549/559), DF2GB (559/569), IK2MMB (569/569), N8CQ (579/579), KN0WS (O/O), SM7FWZ (569/579), W2BYP (579/579), OE5JFL (569/579), NQ7B (559/569), VK4AFL (559/579), RN6MA (O/O), SP3XBO (559/559), F6CGJ (589/579), IK3MAC (589/579), IK6EIW (559/559), VE4MA (559/569), LX1DB (57/56) SSB, SM2CEW (589/589), PA2DW (559/579) and WB8HRW (559/579). After the contest, the quest was **KB7Q portable in WY on 70 cm CW** with a single yagi and 500 W. His geometric pol angle here was 9 degs CW. I found his signal at 60 CCW. I TXed at 120 CCW. Without polarity rotation the QSO would not have been possible (O/O). It was a great month.

KNOWS: Carl carlhasbargen@q.com reports on the **Dubus/Memorial 1296, 10 GHz and ARI Contest weekends** -- Life is a bit easier if I focus on just one band per weekend. However, trying CW has a way of counter-balancing that! On 23 cm, 14-16 May, the very high declination meant my azimuth at moonrise was looking into trees and delayed my start a couple of hours. Over the course of three moonpasses, using digital modes, I worked KD5FZX, KB2SA, UA9FAD, HB9Q, OK2DL, IK3COJ, DF2VJ, PA3FXB, DL7YC, OK1IL, N5BF, SP5GDM, DK3WG, KA1GT, OK1DFC, OK1CA and K5DOG; and had initials (#*) with RX6AIA (25DB) and EA5DOM (22DB). Instead of the usual JT65C, these were a mix of JT65C, Q65-60C and one Q65-30B. I do not like the 30 sec modes. My WSJT starts sending the next message before it has displayed the

last decode. If I have to stop TX to make a change, half of the 30 sec cycle is already lost and the cycle is wasted. I did spend a lot more time this weekend trying CW. As time goes on, I do not think that I am really getting any better. I did work DL0SHF, OK1KIR, DG5CST, KL6M, G4CCH and K2UYH, and had CW initials (#) with I1NDP, OK1CA and UA3PTW for a score of 9x8. I added a final preamp at a T/R relay right at my radio just to get signals loud enough to have a chance, but ended up burning out several preamps! I think when I would insert or remove a cable into the radio key jack, it would temporarily short out and send a tone without benefit of my sequencer. It was mostly cloudy with some rain and I had to shut down several hours because of thunderstorms with lightning. When the sky cleared, I saw the Moon and was 2 degs off. The main steel shaft of my polar mount tends to twist and bend depending upon the direction it is pointing. Correcting by sight, I heard a FABULOUS CW signal from K2UYH, but then blew my 3rd preamp. Instead of an easy QSO, I had a difficult one the next day at zenith with a very fragmented quivering signal - liberation? A special TNX to OK1KIR who called CQ at ~ 5 WPM. I could quickly and easily tell who I was responding to. Many others had loud and pretty clear signals that were just too fast for me to decipher. I think if folks called slower (for folks like me!), I might have worked another 8-10 stations. I was also QRV on 16-17 April for the **3 cm Dubus weekend** with my 1.8 m backyard dish, but had zero QSOs. I lost a preamp early; then had troubles with WSJT; when I TXed, I would lose GPS lock and the radio would shut down; and finally lost my backup preamp. Between preamps, I saw some signals and decoded OZ1FF (16DB), ES5PC (17DB), OZ1LPR (10DB), DL7SHF (14DB), DC7KY (13DB) and OK1DFC (17DB). My Kuhne SSPA supposedly produces 32 W; it appeared to be only getting out about 8-10 W. I think I will take a break from 3 cm for a while. I went up north for **the spring ARI Contest**. I planned to be on 70 cm for the 1st moonpass (20' dish) and then 23 and 13 cm (16' dish) for the 2nd. My 20' dish had a SWR of 1.3 until I started to put power into it. When I got to 300 W, the SWR went to 6.3. I changed the coax and the SWR was OK. But when I TXed, the SWR went up to 5 again. I moved to my 16' dish to try 23 and 13 cm; but never found anyone on the 13 cm logger. I ended up just operating on 1296. During the first moonpass, I worked using JT65 **KB7Q in KY**, CX2SC, PA3FXB, IK5VLS, N5BF, K5DOG, AA4MD, LU1CGB, PE1LWT, DF3RU and LZ1DX; and had initials (#*) with DL3EBJ, LU8ENU, KB2SA, IK7EZN, OK1USW; and then using Q65 KA1GT and DK1KW (#*). I saw a few others such as K2UYH. In the clouds and intermittent rain, I lost the Moon during the "NA lull" and did not see anyone to the west. For the 2nd moonpass, I awoke to find about 1/2" of wet snow on the ground, in the trees and on the roof of my radio tent. The roof had collapsed and was funneling melting snow onto my Bodnar GPS and my two TS2000X radios! (I had one on top of the other). It brought back memories of my spring 2020 ARI Contest when flooding ruined much of my gear. I pulled out my 3rd TS2000x and it worked perfectly, but my FundCube dongle died, so I had no MAP65. The sky was clear to help with pointing, but the temp had dropped to 18 degs F. Definitely a cold night! Using JT65C, I worked VE3KRP, DL7UDA, XE1XA,

W2HRO, AA6I, VE6TA and VK2JDS; and initials (#*) with OM4XA, K2CHFQ and N9JIM and **using CW DU3T**. I scored a total of 29 QSOs. Over the course of 52 hours, I had slept 7!

N5BF: Courtney courtney.duncan.n5bf@gmail.com sends on April/May 1296 activity – I had several initials since my last report. These were all using JT65C unless noted, SM6PGP (17DB/11DB) #213*, SP2SCQ (28DB/16DB) #214*, KF2T (26DB/16DB) #215*, LA2IMA (15DB/13DB) #216*, N8CQ (559/559) #217* using CW, **OM4XA, (19DB/11DB) #218* and DXCC 47**, KB2SA (16DB/17DB) #219* in neighboring San Diego, ON4BCV (24DB/8DB) #220*, N9JIM (20DB/23DB) Q65-60C #221*, KC2HFQ (26DB/30DB) #223*, N2END (19DB/19DB) #225* and N0CTR (18DB/18DB) Q65-60C #231*. I also picked up from the KB7Q tour of the southeast more initials and the States of AR, AL and KY. The KY QSO (21DB/18DB) was my first in the ARI Contest in which made 23 digital and 2 CW QSOs including DK1KW (21DB/22DB) #227*, but only two Italian station multipliers from IK1FJI on CW (569/559) and IK5VLS digital (15DB/15DB). In the DUBUS 1296 weekend, I had 30 QSOs (29 on CW and 1 on SSB), a personal record; and initials with **DU3T (439/429) #228* and DXCC 48**, SP2HMR (539/559) #229*, W2BYP (549/539) #230*, IK2DDR (529/549) #232* and **LX1DB (57/56) SSB #233* and DXCC 49**; and additional SSB QSOs with OK2DL (44/54) and VE6BGT (56/33) – my first SSB EME was PI9CAM (53/52) in the Spring 2017 ARI Contest. My 2nd was in the past Jan SSB Funtest with LX1DB (57/56). My station upgraded to a 3.8 m dish is working well. Three days after the DUBUS weekend, a 45 lb counterweight spontaneously fell off of my dish mount early in the evening; 17 feet to the ground with a loud thump. An upgrade to the mechanical mounting system is under way.

NC1I: Frank frank@NC1I.COM is having polarity control problems with his big array -- My activity the last few months has been very limited. My polarity readout on 432 is not working and after extremely high winds between Dec and early April. Also, my SPID rotor on 1296 suffered severe damage making the dish unusable. In addition, we moved to a new home recently. It is in a highly regulated community with no possibility of putting up antennas. The new home is only 3 km (5 minutes) from the home we had lived in for the past 31 years. We have family members living in the old house, so I will continue to have access to my station, and the move should not have a major impact on my ham radio activities. Just days before KB7Q arrived in AR, we took our 4.5 m dish down and replaced the SPID rotor with a spare. This put us back in operation on 1296. Thanks to Gene's incredibly successful operation, we were able to add four new States to our 1296 total, and bring us to 44. The 44 States were all worked on EME and all have been since Nov of 2013. Other new stations worked on 1296 in April and May include KB2SA, IK7EZN, SM5EPO, DK1KW, and N0CTR to brings our initials to #384* mixed, #{278} digital and #151 CW. **During the DUBUS 1296 Contest**, I was only able to be QRV on Sunday and unfortunately after less than one hour, a line of

thunderstorms moved in forcing me to shut down. The following stations were worked on CW: OK1KIR, SP7DCS, OZ4MM, LZ1DX, G4CCH, UA3PTW, PA3DZL and SM4GGC for a total of only 8x8. On 23 May, we made our first Q65 QSOs. Three stations were worked using Q65 on 1296, KB2SA, N9JIM and N0CTR. We hope to be far more active using Q65 in June. Hopefully that will include some 432 activity. W1QA and I are working on revised plans to activate two rare States on 1296 and one on 432 in late Oct. It's too soon to announce any details and our plans will be subject to the status of the pandemic as we get into Oct. Our travel will require hotel stays and other travel related exposure and we will not take any unreasonable risks. We will provide an update later in the summer.

OK1CA: Franta fr.strihavka@seznam.cz sends his report on recent EME -- On Thursday, 15 April, the weather was still cold but OK; unfortunately, it snowed on Friday night covering my 10 m dish. Despite the snow, I easily **worked on 23 cm KB7Q in AR for digital initial {#87} and a new State**. I then switched feeds for the 3 cm DUBUS Contest. On Saturday the weather continued to be bad. I started with a QSO to VK3NX and made a total of 22 QSOs. I was surprised by how good signals were at a time of maximum spreading. New stations were SP2HMR, F2CT and OZ6OL. CWNr were YO2BCT and HB9BBD. On Sunday, I added another 9 QSOs and finished with SM6PGP for my initial #100! My overall score in the contest was 31x28. I worked outside of the contest using Q65-60D DL7YC, F6BKB and OE4WOG for digital initial {#55}. I was QRV on Monday 19 May on 23 cm to work using Q65-30B **KB7Q {#88} for MS**. In preparation for the 1296 DUBUS/Memorial Contest, on Friday, May 14 I worked using CW IK2DDR for #379 and using JT65C KD5FZX and KB2SA. On Saturday I could only be QRV for the first 6 hours of the contest and made 37 QSOs. **My only initial was DU3T #380** with an excellent signal. On Sunday I was QRV for the whole window and finished with a total score of 72 QSOs x 65 mults; all QSOs were CW except a SSB QSO with LX1DB. Other new stations were IK7UXW, DJ7FJ, NQ7B and KN0WS #384. The participation of stations was high, but weaker from the east with only one JA QSO and two VKs, and the already mentioned DU3T. Apart from the Contest, on Sunday I also QSO'd using JT65C IK7UXW, JH7OPT for digital initial {#92}, KN0WS; and also tested the new mode Q65-60c with OK1DFC.

OK1DFC: Zdenek ok1dfc@seznam.cz was afflicted with COVID19, which sapped his energy and limited his contest operation [He was not in a good way, but is OK now] – For the ARI Contest, I originally planned to be a QRV Saturday on 24 GHz and Sunday on 10 GHz. But by Sunday there was very little activity at 10 GHz, and the Moon was only rising to 30 degs max el. So, I stayed on the 24 GHz band both days. I worked on 24 April at 1728 PA0BAT (16DB/13DB) using QR65-60E, 1802 DB6NT (O/O) using CW for initial #7, 1852 G4NNS (O/O) CW #8, 1957 DL7YC (O/O) CW #9 and 2019 DL7YC (11DB/13DB) QR65-60E, and on 25 April at 0053 **VE4MA (11DB/15DB) QR65-60E for digital initial {#14} and DXCC 13**. and 0105 W5LUA (6DB/16DB) QR65-60E. My equipment consisted of my

260 cm offset dish, 23 W SSPA and 1 dB NF LNA. My Moon noise at this time varied due to clouds from 1.8 to 2.1 dB, and my Sun noise was at a maximum of 12.8 dB. There were plenty of stations on the band. I tested the new QR65-60E mode. It works very well indeed. In addition, I copied PA7JB very nicely, but his RX wasn't working. This activity provided 6 ARI Contest QSOs and added 3 CW initials and one digital and a new DXCC on 24 GHz. I didn't prepare any new things for the 23 cm DUBUS/Memorial Contest. After COVID19, I didn't have much strength or mood to sit in the shack for 48 hours. I just tried to make some contacts with the new Q65-60C mode and provided a few points on the CW. I made contacts on 16 May at 1122 OK1KIR (0DB/2DB) Q65, 1209 DK3WG (14DB/O) JT65C, 1235 G7TTZ (16DB/17DB) JT65C, 1241 LZ1DX (559/579) CW, 1244 OK1CA (579/579) CW, 1251 OK1KIR (579/579) CW, 1300 OK2DL (579/589) CW, 1320 ON4LX (14DB/22DB) JT65C for digital initial {#427}, 1947 UA3PTW (559/579) CW, 2000 PA3FXB (14DB/11DB) Q65, 2023 SM5DGX (559/579) CW, 2040 OK1CA (0DB/1DB) Q65 and 2048 KN0WS (12DB/12DB) Q65 for a total of 6x4 contest QSOs. I was using 260 cm offset dish, 500 W SSPA at the feed and 0.15 dB NF G4DDK LNA. I have been making slow progress in building my new 8 m offset dish. I hope to be QRV with it soon. I am looking forward to the upcoming 6 cm DUBUS Contest.

OK1IL: Ivan ivankait@netscape.net reports on his recent 1296 activity -- During last three months, I added several initials including KB2SA, IK7EZN, YO5BIN, KB7Q and DU3T for DXCC 65. DU3T is QRV only on CW. Ron says he has had some problems with his sound card. I have been working to improve my CW and was very pleased to QSO him. KB7Q also made these grey Covid days more agreeable with his great dxpedition that activated 6 states for WAS. I worked Gene in all of them, and increased my WAS score to 33. My installation of WSJT-X v.4.0 now includes the Q65 mode. It provided an important advantage in working KY. Because KB7Q had to cut short his activity there to only one moonpass, he decided to use Q65-30B to increase the possible number of QSOs. LoTW has already accepted and confirmed my QSLs!

OK1KIR: Vlada vlada.masek@volny.cz and Tonda write about their April and May Moon activity -- We ran 23 cm JT65C tests with VP8EME at beginning of April, but there were no signals on both sides. HB9Q with his big dish did get several decodes (26DB) but nothing was copied at VP8EME. Kuzma promised to check Sun noise with his 51 turn RHCP helix. He has not been heard from since that time. The 3 cm part of the DUBUS Contest suffered from Moon apogee and huge signal spreading. We worked with CW on 17 April at 0742 SP2HMR (559/579), 0803 VK3NX (559/559), 0808 RA3EME (569/569), 0814 SA6BUN (569/569), 0837 SP6JLW (579/569), 0848 OK1CA (559/579), 0908 YO2BCT (569/559), 0932 OZ6OL (559/559) for initial #141, 0942 PA3DZL (559/569), 0955 DB6NT (569/569), 1010 OK2AQ (539/559), 1015 OK1DFC (559/559), 1033 HB9BHU (559/569), 1046 HB9BBD (569/519), 1056 OZ1LPR (579/559), 1137 DL4DTU (559/559), 1143 9A5AA (O/559), 1207 SM6CKU (559/579),

1225 F5IGK (559/559), 1254 F2CT (559/559), 1316 ES5PC (559/559), 1356 OH2DG (569/569), 1448 DL6ABC (559/559), 1615 IZ2DJP (O/O), 1635 G4NNS (559/569), 1643 W3SZ (559/559), 1655 F5HRY (O/O) #142, 1722 UR5LX (549/559), 1732 DF1SR (O/O), 1738 VE4MA (549/559), 1938 SM2CEW (O/O), 2001 IW2FZR (559/559), 2041 VE6TA (O/O), 2055 WA9FWD (O/O) and 2113 IK6CAK (559/549), and on 18 April at 1014 JA6XED (559/559), 1118 JF3HUC (549/559), 1135 OH1LRY (559/539), 1216 SP3XBO (549/559), 1244 SM7FWZ (O/559) and 1507 IK0HWJ (569/529). IK2RTI was only heard in QSO with another station. Regardless the bad conditions, the DL0SHF beacon was copied on Sunday up to 0DB) on WSJT-X 2.4.0. Our grand total for the contest 41x38. On Sunday evening, 18 April we switched to 24 GHz. However, with the terrible spreading even our own echoes were almost unreadable and nobody was found to try CW. We gave up on the contest on 24 GHz. Otherwise, all the 24 GHz activity concerned trying the new Q65-60E mode. With it, we worked out of the contest at 1838 W5LUA (6DB/12DB), 1850 PA7JB (11DB/7DB) for digital initial {#48}, 1908 VE4MA (11DB/14DB) {#49} and new VE DXCC, 1926 RA3EME (14DB/17DB) {#50} and UA DXCC, 2002 OZ1FF (12DB/15DB), 2114 OZ1LPR (13DB/18DB) and 2128 OK1DFC (12DB/14DB). This last QSO was repeated with Q65-60D (1000Hz) at 2137 OK1DFC (15DB/17DB). When compared with mode "E" reports (all versions decoded), mode "E" gave strength reports by 3DB worse [?] and some versions were not decoded. Overall, we also favor mode Q65-60E as best choice for huge spreading, but the sync has to be changed to 700 Hz instead of the standard 1000 Hz at narrower modes. The great KB7Q 23 cm dxpedition through rare US states allowed us to gain 4 new US States on both CW and digi modes. During this dxpedition, we worked on 16 April with JT65C at 1512 KB7Q (12DB/16DB) for digital initial {#416} and later with CW at 1747 KB7Q (539/429) for initial #481 both for AR as our 46th US State, at 1819 IK7EZN (5DB/6DB) #417, 1850 N9JIM (17DB/15DB) #418 and 1923 VE4MA (2DB/4DB); on Apr19 with Q65-30B at 1704 KB7Q (12DB/13DB) #419 and later with CW at 1925 KB7Q (549/529) #482 both for MS as our 47th US State; on 21 April with JT65C at 1944 RJ3DC (17DB/18DB) #420, 2006 (10DB/12DB) #421 and using CW 2146 KB7Q (O/O) #483 both for AL as our 48th US State, 2217 NC1I (1DB/4DB), 2223 K5DOG (1DB/1DB) and 2228 AA4MD (5DB/1DB); on 23 April using Q65-30B at 2126 KB7Q (9DB/11DB) #422, using JT65C at 2224 N2END (13DB/13DB) #423; and on 24 April using CW at 0044 KB7Q (539/529) #484 both for KY as our 49th US State, 0544 JH3AZC (4DB/4DB) #424, 1644 using CW IK3MAC (569/579) and CW 1735 CT1FGW (569/589) #485. Now we need only WV to complete 23 cm WAS. Unfortunately, we are still missing QSL cards from K5PJR in MO from 2009 and from N4CNN in SC from 2016. We sent several times SASEs w/o a response. Can anybody help? Furthermore, on 24 GHz we worked on 23 April using CW and great signals at 1557 SA6BUN (559/559) #32 and SM as new DXCC. Also measured moonnoise = 2.4 dB. In the 23 cm part of EME DUBUS/VK3UM Memorial Contest, we made CW QSOs listed in alphabetical order: 9A5AA, CT1FGW, DF2GB,

DF2VJ #488, DF3RU, DJ3JJ, DJ7FJ, DK3WG, DL0SHF, DL4DTU, DL6SH, DL7UDA, DL7YC, DU3T, ES5PC, F5FEN, F6CGJ, G3LTF, G4CCH, G4RGK, HB9Q, I5MPK, IK1FJI, IK2DDR #487, IK2MMB, IK3COJ, IK3MAC, IK5VLS, IK6EIW, IK7UXW #489, IW2FZR, IZ1BPN, JF3HUC, K2UYH, K5DOG, KL6M, KN0WS, LZ1DX, LZ2US, N5BF, N8CQ, NC1I, NQ7B, OE5JFL, OH100SRAL, OH1LRY, OK1CA, OK1CS, OK1DFC, OK1KKD, OK2DL, OK2ULQ, OM4XA, ON5GS, OZ4MM, PA2DW, PA3DZL, PE1LWT, RA2FGG, RA4HL, RN6MA, SM2CEW, SM4GGC, SM5DGX, SM6CKU, SM6PGP, SM7FWZ, SP2HMR, SP3XBO, SP7DCS, UA3PTW, UA3TCF, UA9FAD, VA7MM, VE4MA, VE4SA, VE6BGT, VE6TA, W2BYP, W4OP, W6YX, WA6PY, WA9FWD, WB8HRW #490 and YO2BCT. With SSB were added DG5CST, DK7LJ, I1NDP and LX1DB. We made on 15 May 68 QSOs, on 16 May 21 QSOs and a total score of 89x75. Off contest, on 15 May in Q65-60C tests we were decoded at FG8OJ (18DB) and at N0ZQ (13DG). Unfortunately, especially from FG8OJ (new DXCC), we did not find a sync trace.

OK2AQ: Mirek mirek@kasals.com sends his report DUBUS and ARI Contests on 10 GHz -- Fortunately, I set up for the 3 cm Dubus Contest on Saturday a week before, when the weather was good. By Tuesday there was a drastic change in the weather, with either snow or rain that lasted for the rest of the week and during the contest. Also there was high spectral spreading that made copy of CW more difficult. It was not until the end of the contest that the spreading dropped below 100 Hz. However, there was good activity, even before the contest. On Friday I tested on Q65-60E with JA1WQF (11DB/9DB) XB and then worked CX2SC (21DB/18DB) for a new DXCC and digital initial {#96}, immediately followed by another initial on CW HB9BHU (549/549) for #25 and others. My full log is at http://www.urel.feec.vutbr.cz/esl/files/EME/LOG/EME_LO_G_10G.htm. In the contest, I made 16 CW QSOs and ended with a score of 16x14 including two initials with YO2BCT (O/O) #26 and F2CT (O/O) #27. One week after the 3 cm contest, I took part in the ARI spring EME Contest operating on 3 cm. The weather was better, although still very cold. The declination was lower and the spread also decreased, although not very good. In between contests, I added SM7FWZ (13DB/8DB) {#96} using Q65-60D. I started the contest in the same mode by connecting to VK3NX (14DB/13DB) and we repeated on CW with a small spread (O/O) #28. This was followed by Q65 QSOs with ES5PC and VK7ZBX in Tasmania with a 60 cm dish and 30 W. The NA station heard and worked was WA3RGQ (20DB/22DB). I also added initials on CW with IZ2DJP (O/O) #29 and SM6PGP (559/539) #30. In the ARI contest I made a total of 24 QSOs, of which 10 were on CW. The result of two weeks of activity on the 3 cm was 65 contacts. Working with the new Q65 mode in many of its variants also brought lessons and great fun. The DL0SHF beacon works very well and its strong signals was (4DB).

OK2DL: Marek ok2dl.eu writes about his activity in 23 cm Dubus Contest -- The Moon was present in the sky during day light hours, so I wasn't suffering from lack of sleep as

is usual during EME contest. I was surprised by absence of any stations from VK/JA. I did enjoy a classical pileup of EU stations calling me. I was also surprised by the special callsign OH100SRAL, which is funny suffix in the Czech language. On Saturday, something broke in my 23 cm transverter. It fortunately started working again after I disconnected the 10 MHz external reference. I did have lower drive power, so my PA wasn't delivering more than 800 W at the feed. I logged 84 contacts and 73 mults. The Dubus contest was very enjoyable and provided lots of fun. [TNX to OK1TEH for translating this report].

OK2PE: Karel ok2pe@kbb.cz main passion is CW EME -- I was very much looking forward to the Dubus 23 cm EME CW Contest. However, Murphy arrived and just before the start, I lost the AZ/EL gear of my mount. There was no way that I was able to be on air ☹. I should be back soon; and want to try 23 cm CW EME skeds. Please email me. [TNX to OK1TEH for translating this report].

OK2ULQ: Petr ok2ulq.blogspot.com wrote -- The Dubus 23 cm CW Contest was held in fine weather and conditions. However, I only had free time on Saturday. Activity was good and I heard several stations. My final result was 34 QSOs x 31 mults. Initials were SM5DGX and DU3T. After failures in the previous 3 cm Dubus Contest with 0 QSOs, it was a pleasant change. [wrote at his blog]

OM4XA: Fero cesnefk@gmail.com reports on the 23 cm DUBUS Contest -- I was active during both days. Only on Sunday we had raining from early in the morning. I had literally a "waterfall" and water caused some of problems that delayed my arrival at the shack until around lunch time. With my setup, a home-made 3 m mesh dish, IC9700 and 200 W SSPA, I worked 17 QSOs on Saturday and added 8 on Sunday for a total of 25 QSOs and 22 mults. I added 10 CW initials with DL0SHF, OZ4MM, OK1KKD, OH100SRAL, SM6CKU, DL6SH, OK1CS, SP7DCS, K2UYH and W6YX to bring me to #33. There were a lot of stations on the band, but with my equipment I didn't call many and probably didn't hear all. But overall, I had a good time and improved my score with all the analog traffic. [TNX to OK1TEH for translating this report].



OM4XA's home made dish for 23 cm EME

ON5GS: Dirk on5gs@telenet.be was active during 23 cm Dubus Contest and sends -- Thanks to everyone for a nice weekend on the Moon with plenty of activity. I had an issue with my elevation encoder and often had to manually adjust my 6 m dish to keep it on the Moon. My SDR's display full of signals made it easy to find the Moon. I worked following stations: DL0SHF, SP2HMR, DG5CST, IK3MAC, OK2DL, OK1CA, SM6CKU, G3LTF, OK1KKD, PA3DZL, LZ2US, IK2DDR, UA3PTW, I1NDP (SSB), OZ4MM, G4CCH, SP7DCS, SM2CEW, **DU3T**, ES5PC, OH1LRY, OK1CS, OK1KIR, SM7FWZ, LZ1DX, OH100SRAL, SM4GGC, DF3RU, 9A5AA, W6YX, SM6FDZ, I1NDP (DUP on CW), PE1LWT, VA7MM, K2UYH, WA9FWD, VE6TA, IK1FJI, IW2FZR, LX1DB and SM5DGX for a score of 40x35. I recently purchased a very nice R&S PA for 432 and plan to build a ring feed to add EME on 70 cm ASAP.

OZ1FF: Kjeld kjeld@oz1ff.dk writes on his March and April activity -- On 10 GHz, I am using a 2.4 m dish with 50 W; and recently worked OZ1LPR, CX2SC, OK2AQ, CT1BYM, F5KVQ, W3SZ and OE4WOG. On 24 GHz, I am using the same dish and 10 W. I recently QSO'd W5LUA, PA0BAT, OK1KIR and VE4MA. Most of my QSOs were made with Q65-60D or E.

OZ6OL: Hans oz6ol@mail.dk is now QRV on 3 cm -- I got my 10 GHz system on air a few days before the Dubus 10 GHz Up Contest. I almost immediately heard SM6CKU and called him for my first 3 cm QSO. Ben's had a very nice CW signal. Later I worked ES5PC and OH2DG also on CW. **In the Dubus Contest** I QSO'd on CW OK1KIR, SM2CEW, SP6JLW, SA6BUN, OZ1LPR, HB9BHU, OK1CA, G4NNS, OH2DG, F2CT, OK1DFC, RA3EME, DB6NT, SP3XBO and PA3DZL for a total of 15x13. In the ARI Contest the following weekend, I worked on 3 cm SM6PGP, IW2FZR, HB9BBD, UR5LX and PA0BAT. **All 5 QSOs** were on random CW. My station consists of a 2.4 m center feed dish and 22 W with WG system. My CS/G is 6 dB, Sun about 15 dB and Moon noise up to 2 dB. I am at a new QTH, but the grid is still the same (JO65dj). My 23 cm dish is down, so my only EME band at the moment is 3 cm.



OZ6OL's 2.4 m dish used on 3 cm

PA3DZL: Jac pa3dzl@icloud.com sends news on his April/May activity -- I was very pleased with the activity and my results during the 10 GHz Up Dubus EME Contest. Worked using CW on 17 April were RA3EME for mixed initial #79*, OK1KIR, OZ1LPR, SP6JLW, OK1CA, ES5PC, YO2BCT, OK2AQ, DB6NT, SA6BUN, DL4DTU, HB9Q, HB9BBD #80*, F2CT #81*, SP2HMR, F5IGK, OK1DFC, OH2DG and W3SZ, and on 18 April VK3NX, IW2FZR, F5HRY #86*, OH1LRY #87*, HB9BHU, UR5LX, SM6PGP #88*, SP3XBO, OK2AQ [DUP] and OZ6OL #89* for a total of 28x23. Outside of the contest using Q65, I QSO'd CT1BYM, F6BKB #82*, SM6CKU, F5IGK, G4BAO #83*, OK1DFC, **CX2SC #84* and DXCC 33**, OE4WOG #85*, VE6TA #90* and DC7KY #91*. The day after the contest I added SM7FWZ using CW #92*, G4BAO Q65, WA9FWD CW #93* and SM2CEW CW #94*. **During 23 cm EME Dubus/VK3UM CW Contest**, I also had a great time. All the CW signals were amazing. I ended with 52 QSOs with 51 on CW and 1 on SSB. The band was full of "beacons". I admire all these OMs that were active throughout the full or almost full Moon window. The strongest signals were from DL0SHF on CW and LX1DB on SSB. I must mention that **I worked KB7Q on 23 cm from NM, AR, MS, AL and KY** for 5 new States. I want to echo the comments of on sending CW and callsigns. Please send your callsign many times, call for longer periods and do not stop - DO NOT GIVE UP!



SA6BUN's rig used to provide 1st SM 24 GHz QSO

SA6BUN: Michael sa6bun@gmail.com reports that on 20 April the very first 24 GHz moonbounce QSO from Sweden was completed -- At 1825 LX1DB was QSO'd on CW (539/559). Willi would not be Willi, if he didn't try an SSB contact with me. Unbelievably, we also worked (53/53) on SSB. My output power was ~ 22 W from an SSPA that was realized in a joint effort with the late JA8CMY and JA4BLC. Also, my good friend OK1DFC, gave me a helping hand in providing PCB's for the needed sequenced gate voltage supply. The LNA so far has a NF of 1.5 dB. The dish used is a 3 m solid PF dish, kindly provided through SM6CKU. I

had used it successfully on 10 GHz; however, was not sure until this very first test, if the surface accuracy would be good enough for 24 GHz. The new 24 GHz setup fits into the dish without obstructing too much of the surface. Nothing has been optimised yet; the focal point was just transferred from 10 GHz and almost certainly is not right. There is still some room for improvement. Nevertheless, over the weekend up to 2.2 dB of Moon noise was measured and 7 more CW contacts completed with OK1DFC, OK1KIR, PA0BAT, DL7YC, G4NNS, W5LUA (also a new Swedish distance record on 24 GHz) and VE4MA. Six of these QSOs represent, country first contacts from SM on 24 GHz EME. If you are interested in a CW QSO with SM on 24 GHz, just let me know, please.

SM4GGC: Stig sm4ggc@gmail.com found good activity and fun in the 1296 Dubus/VK3UM Mem Contest -- I had some small issues with my PA in the beginning. The W6PQL switch used for bias did stop working sometimes with the result of no output power; so I lost a few hours replacing it with a relay. The weather on Saturday was not optimal for 23 cm EME with rain almost all day. Conditions seemed a little better on Sunday. I completed 50 QSOs. 49 were on CW with OK1KIR, ES5PC, OK1CA, LZ2US, UA3PTW, DL0SHF, OZ4MM, DG5CST, KL6M, SM6CKU, IZ1BPN, SP2HMR, IK3MAC, G3LTF, OK2ULQ, OK1CS, I1NDP, SP7DCS, OK1KKD, SM2CEW, PA3DZL, OH1LRY, IK1FJI, G4CCH, WA9FWD, DL6SH, DF3RU, W6YX, K2UYH, CT1FGW, SM5DGX, LZ1DX, OH100S, WA6PY, VE6BGT, SM7FWZ, IK2MMB, VK5MC, DL4DTU, IK3COJ, DL7UDA, 9A5AA, ON5GS, IK2DDR, SM6FHZ, NC1I, W2BYP and I5MPK; and 1 on SSB with DK7LJ. I had 42 prefixes for a total score of 210,000. Things to improve here is to add an audio filter for better reception of CW. Stations copied with strong signals but no QSO were JF3HUC and VE6TA. My Rig is 3.8 m dish with 450 W at the feed.

SM5DGX: Anders jatk@live.se had only limited time to operate the 23 cm Dubus CW Contest – I could only be QRV when my dish was between 10 and 30 degs. My QSO time was about 10 hours, but I still was able to work 64x51. Stations worked were OK1KIR, UA3PTW, OK2DL, OH1OOSRAL, DL0SHF, OK1CA, OK1CS, SP2HMR, OK1KKD, DG5CST, ES5PC, UA3FAD, G3LTF, DL6SH, VK2JDS, OH1LRY, DF3RU, YO2BCT, VK5MC, SP7DCS, OK2DL, KL6M, IK1FJI, SP3VBM, N8CQ, VA7MM, IK3CPJ, IK2MMB, NQ7B, 9A5AA, N5BF, SM4GCC, PA3DZL, WA6PY, G4CCH, IK2ENR, DF2GB, W6YD, VE6TA, F6CGJ, SM6FHZ, VE6BGT, OE5JFL, SM7FWZ, VE4SA, K5DOG, LZ2US, DU3T, IW2FZR, SM6CKU, IN1NDP, WA9FWD, SM6PGP, VE4MA, OM4XA, PE1LWT, OK1DFC, W2BYP, ON5MS, CT1FGW, SM2CEW, LX1DB and K2YUH. The conditions were very good with very strong signals. My rig is an 8 m dish with septum feed, TH347 PA with good power, DDK LNA, DB6NT transverter and TS2000.

SM6CKU: Ben ben@sm6cku.se sends a brief summary of his DUBUS 23 cm CW Contest results – I made 63 QSOs in 11 hours of chair time. The weather was 12 degs C with

rain most of the time. I was surprised to add 10 initials. My station is an 8 m dish with 200 W @feed.

SP2HMR: Marcel m@e.pl reports that the 2021 Dubus 3 cm Up Contest was a great improvement over 2020 -- One year ago, due to a failure of my PA, I was only able to be QRV for a few hours, on the last day. This time the equipment worked perfectly. I operated from moonrise to moonset. Measurements of the Sun noise at SFI 71 were 15.8 dB and Moon noise 2.2 dB with my 3 m dish. It was a challenge to properly drive my TWTA. After adjustment, I had 91 W of output; more than I ever had before. When I heard the first echo, I knew I was in good shape this year. I ended with 33 stations and 29 mults all on CW in my logbook: OK1KIR, RA3EME, OK1CA, YO2BCT, OZ1LPR, DB6NT, ES5PC, SA6BUN, SP6JLW, OK1DFC, HB9BHU, DL4DTU, PA3DZL, IK2RTI, DL7YC, 9A5AA, F5IGK, G4NNS, OK2AQ, HB9BBD, VE4MA, IW2FZR, VK3NX, OH2DG, SP3XBO, UR5LX, IZ2DJP, OH1LRY, W3SZ, SM7FWZ, SM6CKU, SM6PGP and WA9FWD. It was great fun!

SP6JLW: Andrzej's sp6jlw@wp.pl team (SP6OPN and SQ6OPG) were active during 3 cm Dubus Contest – We had a great time, but were not able to operate on Sunday evening. We made a total of 35 QSOs and 33 mults, all CW. QSO'd on Saturday were RA3EME, OK1KIR, OK1CA, ES5PC, YO2BCT, OZ1LPR, SA6BUN, OK2AQ, HB9BBD, PA3DZL, OZ6OL, OK1DFC, SP2HMR, G4NNS, DB6NT, 9A5AA, DL4DTU, SP3XBO, F5IGK, SM6CKU, DF1SR, HB9BHU, DL6ABC, VE4MA, UR5LX, OH2DG and W3SZ, and on Sunday IK6CAK, VK3NX, F2CT, OH1LRY, SM6FWZ, IZ2DJP, IK0HWJ and IW2FZR. [OK1TEH suggests checking out some interesting videos at: <https://www.youtube.com/user/SP6JLW/videos>].

VA7MM: Mark (VE7CMK/VA7MM) and Toby (VE7CNF) va7mm@rac.ca were active on 1296 CW for the EU/VK3UM Mem EME Contest weekend -- 27 QSOs were made with 24 mults for a score of 64,800 points in about 8 hours of operation. Two stations were added to our initials list; SM5DGX and CT1FGW to bringing us to mixed initial #278*. VA7MM operates with an OZ9CR water cooled cavity PA; our power at the feed of our 3 m dish is 200 W. On receive, we have a 0.33 dB NF LNA with 35 dB gain in three stages. We are available for scheduled contacts by email at any time.

VE3KRP: Fast Eddie eddie@tbaytel.net sends his report on 23 cm EME in April – I QSO'd using JT65C on 19 April KB7Q in MS for a new State and initial (#*), OK1DFC, IK1FJI, IK2MMB, SP2SCQ and RX6AIA (#*); on 22 April KB7Q (#*) in AL for another new State, GM0PJD and IK7EZN; and on 24 April DL3EBJ, PA3FXB, LU1CGB, LZ1DX, OM4XA, PE1LWT, DK1KW (#*), KN0WS, LU8ENU, AA4MD and DL7UDA.

VE4MA: Barry's barryve4ma@gmail.com EME report -- In April my emphasis was following KB7Q on 1296. [Barry helped with my 1978 432 dxpedition to ND and sent a picture]. I did make an appearance on 10 and 24 GHz for

the DUBUS Contest. I operated 10 GHz on 17 April and on 24 GHz on 18 April. I have been off of 24 GHz for several years due to TWT power supply problems. I have been able to repair 2 power supplies and test some tubes. Murphy came for a visit and my AZ encoder was acting up during the 24 GHz operation and I had to manually peak the dish on Moon noise, but peaking on 1 minute intervals was not a great solution. I did work using Q65 unless noted OZ1LPR (19DB/13DB), OK1KIR (11DB /10DB), LX1DB (O/O) on CW, W5LUA (8DB/19DB) and OZ1FF (13DB/14DB) for 5 QSOs. I was also active for the second day of the **DUBUS 1296 Contest** and worked 21 stations, but found conditions poor with a high libration of 185 Hz. VE4SA was active on the first day. I have been testing a NOS 170 W TWT for 47 GHz, but the tube has remained gassy in spite of my best efforts and the filament of the tube has now opened. So, I moved to working with a 38 GHz TWT, but it does not work well enough and am moving to another tube similar to what DC7KY has done successfully. I am waiting for some high voltage connectors to arrive. In the meantime, I did some work and now have my encoders working reliably again. I am looking forward to the next 24 GHz activity in the fall. I plan to be active on 5.7 GHz in June Dubus EME Contest.

W2BYP: John storyavenue@hotmail.com was on 23 cm for some hours on Saturday of the DUBUS event -- I completed a run of 5 QSOs and then lost an LNA. I stopped to find the issue. I pulled the LNA and protection relay box out of the feed and brought them down to the bench. I had noticed while doing cold sky to load measurements in the continuum mode of SpectraVue that the measurement in load position would fade downward. The 28 VDC source in the feed box was dropping and the relay was slowly releasing. I fixed with a new power supply; and after a few hours was back in operation. I worked another 13 stations that day, and an additional 23 on Sunday for a total of 41. I especially enjoyed listening to LX1DB work many stations on SSB with great signals from all. I tried to call, but quickly realized my local fan noise was too high, so just sat back and listened to the fun. Thanks to the participants and the sponsors for a great weekend event. Also, I now have a 1.8 m dish up now on a sub-Lunar/Green Heron positioner system, and am building a 3 cm system.

WA6PY: Paul pchominski@maxlinear.com was QRV on 1296 in DUBUS Contest -- I QSO'd: 9A5AA, DF3RU, DG5CST, DL0SHF, DU3T, ES5PC, G3LTF, G4CCH, I1NDP, I5MPK, IK1FJI, IK2DDR, IK2MMB, IK3COJ, K2UYH, K5DOG, KL6M, LX1DX, LZ2US, N5BF, N8CQ, OH100SRAL, OH1LRY, OK1CA, OK1CS, OK1KIR, OK1KKD, OK2DL, OK2ULQ, PA3DZL, SM4GGC, SM5DGX, SM6CKU, SP2HMR, SP3XBO, SP7DCS, UA3PTW, VE6TA, W2BYP, W6YX and WA9FWD for a score 41x36. I was active only during my first JAVK window. There was very bad libration on NA stations, but DU3T was very strong and clean. I am planning to be active in the 6 cm DUBUS Contest. [Paul had surgery on his arm. He is in recovery and only had limited use of his left arm. He says that he is doing we well, but still cannot easily make feed changes.]

WA9FWD: John WA9FWD@outlook.com is working on improving his 3 cm system -- I have a new Kuhne 60 W SSPA that I just finished installing the Friday evening before the **Dubus 3 cm Contest**. When I checked RX, I only had 5 dB of Sun noise. However, after repositioning my feed, I got it up to 10.8 dB, but my Moon noise was still very low at 0.5 dB. My CS/G seems normal, and I blame the poor results on the surface of my 4 GHz TVRO dish. In the contest I was able to work OK1KIR, SA6BUN, SP2HMR and OK1DFC for a total of 4x4. During the week, I added PA3DZL, UR5LX, ES5PC and SM6PGP. All my QSO were on CW. During the next few weeks, I want to try a new surface on my dish. I have some aluminum panels from a 10' dish that I used years ago that I want to try on this dish to see if they make any difference. [John was also active in the 1296 Dubus Contest, but we have not yet received his report].

K2UYH: I (Al) alkatz@tcnj.edu had an exciting time on EME this past month. I have been collecting States on 1296 toward WAS for more than 50 years. The first QSL in my WAS card stack was from 1967. I became serious about completing 1296 WAS in the 80's after completing 432 WAS and started spending more time on 1296 EME. By 2000, I was over 35 States. In 2007, when the first two 1296 WAS's were completed by W5LUA and K5JL, I had 46 States. I needed AL, AR, MS, and SC. But, when I check my cards, I found that I was missing QSLs from MN, MT, NB and OR. I had actually operated from MT at the same QTH that I was missing a QSL. Worse, there was a 1296 dxpedition to MT in 2007 that I did not work because I already had the State. Sadly, all were gone or unreachable. So, I had to rework these States too. **The moral is to get your QSLs while you can and do not assume anything.** By 2020, I was back up to 46 States. MT, AL, AR and MS were all I needed. Then, W2HRO came up with his idea for a conductive fabric folding dish. Paul said that he would get the States I needed active. He contacted KB7Q in MT, who had been having great success on 144 and 432 with portable EME. Gene had never been on 1296. Paul convinced KB7Q to try one his dishes on 1296. Gene was amazed by how easy it was to make EME QSOs on 1296 with a small dish. Within about a month, he was up to initial #49 and I had a QSL for MT. This left me only the 3 (adjacent) southern States to work for WAS. Gene decided to help me reach my goal and make my more than 50 year quest possible! As Gene and his XYL both were VAX'd, they decided to hit the road and activate some States on 23 cm EME. They made a quick trial run on 19 March to AZ. Although they had some problems with weather and equipment, they made 11 QSOs and decided to move forward with their dxpedition plans. [See KB7Q's report for details on his end]. Since my last report I worked on 1296 on 15 April at 2138 KB2SA (10DB/12DB) using JT65C for mixed initial #667*; on 16 April at 1738 KB7Q (10DB/11DB) JT65C #668* and AR for WAS 48, 1916 OK1USW (16DB/14DB) JT65C #669*, 1932 VE4MA (3DB/10DB) JT65C, 1959 GM0PJD (13DB/8DB) JT65C, 2010 IK7EZN (12DB/10DB) JT65C #670* and 2055 KB7Q (O/O) CW for initial #425 in AR; on 17 April at 1846 RA4HL (6DB/5DB) JT65C, 1916 IK7UXW (13DB/14DB) JT65C, 1940 KC2HFQ (19DB/20DB) JT65C #671* and

2135 CT1FGW (559/559) CW #426; on 18 April at 1928 KB7Q (10DB/16DB) JT65C #673* and MS for WAS 49, 1948 CT1FGW (569/579) CW, 1952 DF3RU (579/579) CW, 1956 SM4GGC (559/559) CW, 2005 I5IDY (559/539) CW, 2052 OZ1CTZ (26DB/21DB) JT65C #674* and 2110 SM5EPO (25DB/O) JT65C #675*; and on 19 April at 0035 KB7Q (O/O) CW in MS #427; and on 21 April at 2100 KB7Q (13DB/17DB) JT65C #676* in AL to complete WAS - (the cards have now been approved by an ARRL card checker and I am now awaiting a WAS certificate), 2122 OM4XA (7DB/3DB) JT65C #677*, 2140 IK1FJI (1DB/5DB) JT65C, 2148 GM0PJD (10DB/2DB) JT65C and 2159 W2HRO (8DB/7DB) JT65C; on 22 April at 2316 KB2SA (6DB/9DB) JT65C and 2326 LU1CGB (13DB/10DB) QE65C-60 for my 1st QE QSO; and on 23 April 2240 KB7Q (15DB/17DB) Q65B-30 in KY #678*, 2310 KB7Q (10DB/O) JT65C and 2356 KB7Q (O/O) CW #428. I did not operate in the 10 GHz Up Contest as I did want to take a chance (probably very small) of doing something that might ruin my chances of completing WAS. I was only able to operate in the ARI EME Contest for about one moonpass. I QSO'd on 24 April on 1296 at 0000 PE1CHQ (3DB/7DB) JT65C, 0003 LU8ENU (13DB/7DB) JT65C, 0005 NA1V (3DB/2DB) JT65C #679*, 0012 OM4XA (7DB/2DB) JT65C, 0030 PA3FXB (5DB/8DB) JT65C, 0038 N5BF (5DB/9DB) JT65C, 0045 AA4MD (2DB/3DB) JT65C, 0050 0100 KB7Q (O/O) CW in KY #429, 0127 DL3EBJ (569/579) CW, 0132 XE1XA (569/569) CW, 0140 NQ7B (569/559) CW #430, 0150 K5DOG (569/589) CW, 0220 DL8EBJ (4DB/1DB) JT65C, 0230 IK1FJI (579/579) CW, 0248 LU1CGB (10DB/4DB) JT65C and 0253 N9JIM (17DB/O) JT65C #681; switched to 432 at 2347 S51LF (13DB/19DB) JT65B; on 25 April, on 432 at 0010 PA2V (6DB/19DB) JT65B, 0020 KU4X (13DB/O) JT65B, 0022 RD3FD (18DB/19DB) JT65B, 0042 KD2LGX (7DB/12DB) JT65B, 0050 N1QG (19DB/O) JT65B for mixed initial #1033*, 0058 G3LGR (22DB/O) JT65B, 0106 AA5C (11DB/16DB) JT65B#1034*, 0118 N5NHJ (23DB/15DB) JT65B #1035* also tried CW but I could not get calls. I made 17 QSOs on 23 cm of which 6 were on CW. On 70 cm I made 10 QSOs, all on JT65B. On 9 May I worked on 23 cm at 1400 G3LTF (569/579) on CW it was good to find Peter back on after his accident. I operated in the VK3UM Memorial/Dubus 1296 Contest and was joined for several hours by K2QFA. QSO'd on CW were on 15 May at 0008 WA9FWD (559/559), 0024 VE6TA (569/569), 0032 KL6M (579/579), 0050 DU3T (559/559), 0105 WA6PY (569/569), 0140 N5BF (459/559), 0200 K5DOG (569/549), 1545 OK1KIR (569/569), 1555 OK2DL (599/599), 1617 DG5CST (579/579), 1621 DL0SHF (589/579), 1630 OK2KKD (559/569) #430, 1636 OK1CS (569/579), 1640 CT1FGW (559/579), 1651 OK2ULQ (559/579), 1653 G3LTF (569/579), 1657 UA3PTW (569/589), 1700 SM4GGC (559/565), 1709 SM7FWZ (559/579), 1720 OH1LRY (559/579), 1725 IK2DDR (559/569) #431, 1735 DL6SH (559/559), 1745 IK3MAC (579/569) #432, 1750 W6YX (569/559), 1752 IK2MMB (559/569), 1803 PA3DZL (569/569), 1812 LZ2US (569/579), 1815 SP7DCS (569/579), 1820 DF3RU (569/579), 1825 IK1FJI (569/569), 1833 IK3COJ (559/569), 1846 DL7UDA (559/579), 1915 OH100SARL (569/569), #433, 1920 SM6CKU (589/589), 1940 SP3XBO (559/559),

1950 N8CQ (569/579), 2013 LZ1DX (569/579), 2022 VA7MM (559/559), 2048 SP2HMR (569/579), 2058 ES5PC (569/569), 2105 W2BYP (569/569), 2135 G4CCH (579/579), 2206 VE6BGT (569/559), 2250 N6OVP (559/559), 0115 VK4AFL (559/559), 1642 9A5AA (559/589), 1700 IW2FZR (569/569), 1717 SM6PGP (559/559), 1725 VE4MA (559/559), 1735 UA9FAD (O/559), 1826 G4RGK (569/569), 1829 OK1CA (579/579), 1853 ON5GS (559/559), 1905 OM4XA (559/559), 1914 OE5JFL (559/569), 1952 LX1DB (56/56) on SSB, 2018 I1NDP (579/579), 2030 SM2CEW (579/579) and 2041 SM5DGX (579/559) for a total of 60x50. I enjoyed the contest, although at times I found the CW copy difficult. I am now looking forward to the 6 cm Dubus competition.

NET/CHAT/LOGGER NEWS: **VK4AFL** was QRV on 1296.030 for the Dubus Contest and reports working K2UYH, K5DOG and VE6TA. **GM4PMK** is now QRV on 9 cm EME. [This may be the first 9 cm EME from GM!]
IW4FZR was QRV in the Dubus 23 cm CW Contest, but notes that he operates his station via remote Internet control. Sometimes the WEB isn't fast enough and other times the signal is not clear! Dario apologizes for his many QRZs. **JA6AHB** expresses the frustration of many JAs that **expedition stations often do not stay on long enough to work his part of the World.** Most of the EME activity is from EU. By the time the Moon has moved to Toshio's window, they have closed down for the day. We all should keep this in mind if want to maintain activity in Asia/VK/ZL. **PJ2BR** is putting together a 23 cm EME station. So, Curacao may become active in a few months. [TNX KB7Q for sending this info]. **UR5LX**: finally has a 24 GHz WG LNA. Sergey is now working to tune up the input of an RW1127 TWT. **DL0SHF** op DK7LJ has recordings from the 23 cm Dubus Contest at https://www.youtube.com/channel/UC4splU_M_z7BgkKt01PLA.

FOR SALE: **ON7UN** has a 3 m solid very accurate dish and motorized mount available. You must act fast or it will be scraped. If interested email Eddy at ejespers@telenet.be. **SM6CKU** has a 2.4 m offset dish made by Vertex in good condition. Comes complete with ground post, manual az/el mount and Gregorian feed system. It should be good on 10 and very likely 24 GHz with another feedhorn. Must be picked up at my QTH. Weighs > 200 kg. Contact Ben for more details at ben@sm6cku.se. **OK1TEH** still has for sale a 3 m solid dish with good surface up to 24 GHz and massive ribs. Contact Matej at ok1tehlist@seznam.cz if interested. **DF6NA** has for sale 2 new, never used Toshiba UM2683A that should deliver in excess of 40 W each. Contact Rainer directly. Prefers EU sale. **ON4BCB** has for sale a PCB for the DIY OE5JFL standalone tracker PCB. Walter produced the board to help people with a DIY project. It is not fully documented so it needs some DIY skills. It is based on the Megatron MAB25/ETS25 encoder. See http://www.avg.com/email-signature?utm_medium=email&utm_source=link&utm_campaign=sig-email&utm_content=webmail. Prices are PCB (only): EU10, PCB + MCU: EU20, MCU: EU and Button PCB: EU10 + Shipping in EU is EU10 and USA or VK EU15. Payment by Paypal in euro's to on4bc@gmail.com (all Paypal costs by buyer). **SA6BUN** is looking for a low profile WR90 termination for

max power of 5 W. If have some contact Mike at sa6bun@gmail.com. **SM4GGC** reports the nice MW dishes and links are available at SM4CHK (JO69th). See http://sm4ggc.se/MW%20Ham%20items_210428.pdf for a complete list. If interested contact Oscar (SM4CHK) at po.backman@satcube.com or phone +4670 8430102. **SM7SJR** is looking to by HPAs to use on 70 and 3 cm EME. Bjorn is also looking for a 2nd RX for 70 cm. Contact him at sm7sjr@gmail.com. **W2HRO** now has for sale in addition to his folding dishes and 1296 patch feeds with hybrids for circular pol, wideband preamps for 23 cm based on the Qorvo QPL9547 MMIC. They don't have the lowest possible NF, but they are very capable, stable and flexible. Paul can be reached at w2hro.fn20@gmail.com.

W2AXO has for fans of Project Diana her new book, *To the Moon and Back: Essays on the Life and Times of Project Diana*, available on amazon in 3 versions ([black & white paperback](#), [full-color paperback](#), and [kindle](#)). Nearly half the book is devoted to the history of radar at Camp Evans, starting with its fumbling beginnings at Pearl Harbor and culminating in the stunning success of Project Diana. The remaining two sections are devoted to my father and his family background, and to my Jersey Shore childhood in postwar America. For further information about the book, please visit my [author website](#). And while you're there, please check out [my new blog, LOL](#) (Little Old Lady) for news about my current work, previews of work-in-progress, what I'm reading, what I'm thinking about, what's going on around me, and probably an occasional soliloquy on my cat. The first post is about my new book and how it came about. Two requests: 1) If you read and enjoy my book, please leave a review on [amazon.com](https://www.amazon.com). 2) If you'd like to be notified of new posts to LOL, please respond to this email - a simple YES will do! TNX and 73, Cindy, W2AXO www.cindypomerleau.com.

ASTRONOMICAL CORNER (led by OK1TEH): Hi astro-friends, this time I'd like to bring to your attention the British Astronomical Association, which recently had some nice online meetings captured at YouTube. Some of them deal with topics such as meteor scatter and hydrogen line reception. See <https://britastro.org/node/25798>.

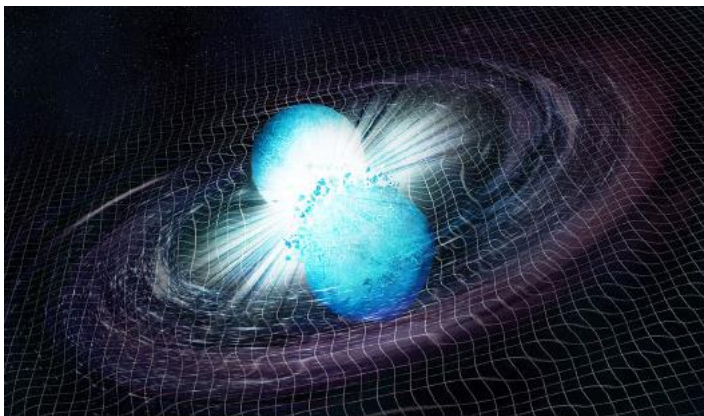


Illustration of a key part of the process that creates a new black hole; the two neutron stars spin around each other while merging.

Black hole collisions and neutron star pulsars may solve the mysteries about the expansion of the universe: Astrophysics have been refining the problem of the measurement of the specific value of the Hubble Constant, which corresponds to the rate of expansion of the Universe. One method involves observing specific Cepheid-supernovas in foreign galaxies. Unfortunately, the results of different methods, give different results. At University College London, they designed a new method that uses the collisions of black holes and neutron stars. From such events, the resulting gravitational and light waves can be used to determine the Hubble Constant H_0 . It is predicted that by the end of this decade, there could be detectable gravitational waves corresponding to about 3,000 of these events; and that for about 100 of them, light could be simultaneously seen with our telescopes. Stephen Feeney states that the analysis of gravitational waves can tell us at what distance they occurred. It is only left to determine the speed that the object is moving away from us. From the analysis of the light accompanying the collision, we can find out in which galaxy the event occurred. Then, by measuring the red shift of the galaxy, we know the speed with which it is moving away from us. Even if not every gravitational wave will have any accompanying detectable light - (It will only take place in special cases where a black hole will first tear the neutron star before the merging of both bodies), we will still gain valuable information. "In addition to helping us unravel this puzzle, the spacetime ripples from these cataclysmic events open a new window on the Universe. We can anticipate many exciting discoveries in the coming decade. The team's results were published in the *Jur. of Phys. Rev.* <https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.126.171102>

FINAL: We learned that EME pioneer W3SDZ became a Silent Key on Jan 10 at age 86. K2TXB documented some of Vic's achievements in the Mt. Airy VHF Club's NL at <https://www.packratvhf.com/index.php/newsletter/987-cheese-bits-may-2021>. See excerpt at end of this NL.

► There are a lot of reports written in this NL and others about the CW and digital EME. It is hard not to be affected by the strong and sincere feelings that our expressed. Here are some of our (Matej and AI) thoughts: [OK1TEH -- I don't want to extend the seemingly endless discussion about which mode is better. On other hand, I want to say that CW is fun to operate and something that I don't want to see die. I think we must labor to keep CW traffic alive on the 23 cm band where there is the biggest CW EME activity. May be we can come up with a new whole-year CW contest with a special 1st place prize such as a special paddle or something similar. Please send me your ideas?] [K2UYH: I find I can enjoy EME QSOs made by both CW and digital means. I find that there is still some skill involved in making digital EME QSOs. (I do see an effort being made to eliminate the need for skill and am distressed by the progress being made to achieve this goal). For those interested in only making CW QSOs, there is still plenty of CW activity on the EME bands as demonstrated by the recent 1296 Dubus/VK3UM Memorial Contest. Let's face it, in a time of no code licensing, there are now many VHF up

operators who do not know CW. Yet because of the digital modes, some of these operators get "hooked" on EME and end up learning CW to make more challenging QSOs. KN0WS is a good example. Carl has truly learning CW to give out MN to EME ops wanting CW QSOs. OE5ERC, who is sadly not active today, knew no CW when he started on EME, but became a major CW operator. I will not give up CW. I do try to have fun no matter what the mode. After many years, I still get excited when I hear echoes coming back from the Moon.]

► ON0EME is not yet back on. There is still a lot of work to do since the part that broke is inside mount. They need to lift the complete antenna off the mount with a crane. They are looking at a Plan b requiring no lifting is necessary. The antenna is not very easy to access by a crane. They hope to get it back tracking the Moon soon, but cannot give any timeframe.

► EME 2021 Prague: OK1DFC has announced EME2021 been postponed to Aug 2022 because of COVID19 in EU. Zdenek writes that considering all things, the EME 2020 team decided on one more move, to 2022. There are several factors that led to this proposal. 1 - the hotels will only open gradually from June and according to the operator of the Top Hotel, there is no certainty that they will operate at 100% in Aug. 2 - travel and COVID mutations. There is currently a problem with the Indian mutation. It may look like Pfizer is working on it, but from the point of view of many countries, it's not sure how it's going to be in the summer with travel. 3 - the same situation for airlines, the US still has not allowed free travel to the EU. Same with AU. 4 - earlier today, doubts began to arise about the Tokyo Olympics. The same problems as above, and the Olympic team has much greater resources available than our EME2020 team. 5 - population vaccination coverage at 75% is not expected until autumn 2021. Another problem that is starting to emerge after the loosening up is a price increase of 15-20% in restaurants and services. I'm sure you see it in your countries, too. But it will be a question when we discuss all the services ordered. The hotel is holding the line. Thank you for your understanding and we look forward to seeing you in 2022. We still think it makes sense to organize the conference in such a way that personal meetings and joint discussions can take place. More details on our EME conference will be on the web soon.

► This is the May issue and we truly tried to get it in the mail before the 1st of June. We will try to catch up this month and get the June NL to you before July. With your help we will be able to report on the 6 cm Dubus Contest before the beginning of July. Your support has been terrific! We hope to hear you off the Moon no matter what mode you operate. 73 and stay well, AI – K2UYH and Matej – OK1TEH.

Silent Keys by Russ, K2TXB: When you have been an active ham for over 60 years, you remember a long list of familiar call signs that you have worked or read about over the years. As time passes, you realize that some of them have become silent keys. The term "Silent Key", is surely

familiar to all of us older hams, but maybe not so clear to the younger of us. It simply means that the morse code key that the operator used to communicate with has gone silent and will never be heard with his 'fist' again. In recent years I have lost a number of close ham friends who became silent keys, and so I have begun to scan the silent keys listings in QST each month for calls I recognize. I often do see old familiar calls there, and sometimes 2 or 3 in the same month. Of course, it makes me sad, but it also reminds me of that op, and brings back memories of happy contacts or other interactions. This month (May 2021), only one call caught my attention; W3SDZ. Now I did not know Vic Michael, W3SDZ, of Williamsport, PA, very well. I am pretty sure I never worked him on the air. But I can remember very well admiring the pioneer EME work that he did, and his 27 foot home made parabolic dish antenna. So I decided to do a little research and see what more I could find out about Vic. One of the first references I found was the picture, of an early EME conference in 1968.

Now this picture is almost a who's who of early moonbouncers. The only ones I don't know are K2JNG and K2AQC, but I bet some Packrat readers know them. K2CBA, Jud, was a good friend of my lifelong friend W2DRZ, and I have visited Jud at his home and seen his shack and antennas. In later years I worked him many times on 10 GHz via tropo.

W3SDZ, was possibly the most accomplished moonbouncer at that meeting and at that time. He is listed in numerous lists of early eme contacts.

VK3ATN accomplished the first EME contact from Australia, working K2MWA, the Crawford Hill Radio Club. I read all about his stack of four 700 foot long 2 meter Rhombic antennas, and closely followed the Activities of another Rhombic user here in the US. Dick, K0MQS, built Rhombics and was the first person to work all states on 2 meters. I used to have almost nightly QSO's with Dick on 2 meters from my first QTH near Jamestown, NY. When I moved to NJ and finally got on 2 meter EME myself, I wanted to work VK3ATN. I don't recall why, but I ended up with a sked with VK5MC instead. But come sked time there was no sign that he was on the air. But tuning up the band a bit, there was VK3AUU coming through loud and clear! His CW signal was easy copy and I got my first down under contact on April 15, 1989. The next guy is our own Al Katz, K2UYH, (still very much with us!) and active on EME.



L-R: K2JNG, K2AQC, K2CBA W3SDZ, VK3ATN, K2UYH, W6DNG

